May 2001

Life Cycle of ITS Standards

From Initial Development to U.S. DOT Adoption

SDO develops, approves, and publishes standard → **Standard is tested** → **Standard matures and ITS products are developed** → **Adoption of standard through U.S. DOT rulemaking**

Standards development organizations (SDOs) coordinate the development of standards:

1) During **development**, an SDO committee writes and documents the technical aspects of standards.

2) Standards then go through a **balloting** process, where committee or working group members review the technical merits of the standards. A standard may or may not pass balloting.

3) Standards that have passed all necessary ballots are **approved**. At this stage the standard can be used but is not yet published.

4) Approved standards are **published** by the SDO and are available for purchase.

Testing measures the operation, correctness, and completeness of a standard under realistic transportation operating conditions. It also measures the degree of interoperability among standards as well as provides information about the performance of a standard to the ITS community.

As standards **mature**, competition develops among vendors to provide a range of equipment with differing levels of functionality. This gives transportation managers greater flexibility in choosing products that best suit their particular project requirements.

Standardized components lead to **interoperability** (the capacity of a device to communicate with different types of ITS devices) and **interchangeability** (the capacity to substitute one manufacturer's device for another).

ITS devices, based on open standards, lead to costs savings, as well as to easier and more efficient systems maintenance and operations.

Not all ITS standards reach this stage. The U.S. DOT will only consider adopting an ITS standard through **rulemaking** if the standard meets, at a minimum, certain established criteria. These criteria are defined in the *Final Rule/Policy on the National ITS Architecture and ITS Standards* and are intended to produce technically and commercially viable ITS standards and equipment.

STANDARDS ITS www.its-standards.net